Sterling Reporter

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Co-Op Spotlight

by Melody Paschetag, Service Hydrologist

To honor our dedicated daily weather observers

Inside this issue:

The Golden/Thomas family has over 50 years of service

In Cumberland MD, being a volunteer weather observer for the National Weather Service is a Afamily business.@ Tim Thomas is the cooperative weather observer in Cumberland MD. He started by watching his grandfather, Robert Golden, take daily temperature and precipitation readings. Mr. Golden started the Cumberland station July 1, 1947. As Tim and his brother, Keith, grew older, they began helping their grandfather take observations. On June 6, 1964, Keith became the official weather observer in Cumberland, following in his grandfather=s footsteps.

Frostburg Tornado Damage (Photo by Sean Thomas)

Tim continued to help with the daily observations but was still not old enough to sign a contract with the National Weather Service. He started taking weather observations when he was a Junior at Fort Hill High School but became the official Cumberland observer April 1, 1970. Tim has been the weather observer for 32 years and has been recognized by the National Weather Service and the State of Maryland for his outstanding service as a volunteer cooperative observer.

Tim is a full-time dispatcher for the Allegany County Office of Emergency Management. Since many emergencies are weather related, Tim uses his local observations and experience to help the community. Tim also writes the monthly Weatherwise column for the Cumberland Times Newspaper. Tim is active in the community. He has been a member of the LaVale Rescue Squad for nearly 30 years. He has been active in Boy Scouts starting as a Cub and is now the Scout Master of Troop 2. Tim is also an active member of the National Park Service Bike Patrol.

Sean now assists his father in taking weather observations, as Tim did with his grandfather. Sean is a Registered Nurse at Cumberland Memorial Hospital. Keeping the climate history is truly a family business.

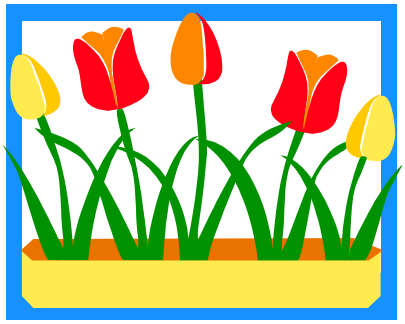
Tim was working in dispatch the night of the Frostburg tornado. He, and his son Sean, helped the NWS document the tornado with pictures, one of which is above. Other pictures can be found at: **http://weather.noaa.gov/lwx/Storms/Frostburg.htm**

Co-Op Spotlight… The Oldest Station in the State

The Cooperative Observing station at Dale Enterprise, VA is the oldest station in the state operated by the same family. It is the third oldest official station in the United States.

Lewis J. Heatwole (L.J.) started keeping weather records in his diary in 1868 at age 15. In 1884 he started sending weekly and monthly weather reports to several newspapers in the state and a year end report to magazines outside of Virginia. On July 10, 1884, L.J. agreed to be the official weather observer for the U.S. Signal Corps and was presented a certificate signed by General Hazen. L.J. was recording weather data before there was a AWeather Bureau@ which is now called AThe National Weather Service.@

L.J. operated the station until his death in 1932 at age 80. His son, Justin, and daughter, Elizabeth, took over after their Father=s death. Justin passed away in 1959 and Elizabeth M. Grove (L.J.=s daughter) continued recording the Dale Enterprise weather data until her death in 1963. Elizabeth=s husband, Earl Grove, continued the weather records. He married Grace Suter in 1968 and together, they recorded the weather. After Earl=s passing in 1984, Grace kept the daily weather records. In 1987, the baton was passed to Richard Weaver and his wife, Virginia Grove Weaver, where it currently resides. Virginia is the daughter of Elizabeth and Earl Grove and the granddaughter of L.J.



Richard Weaver is active in the community. He is an amateur radio operator and a volunteer severe weather spotter for the National Weather Service=s SKYWARN program. Mr. Weaver is a retired pastor. He was ordained in 1948 and served as a pastor in West Virginia, Pennsylvania, and Virginia. At age 82, he still serves as Elder at a church in Staunton VA. As the observer for Dale Enterprise, Mr. Weaver sends copies of his monthly reports to several local businesses in the Dale Enterprise/Harrisonburg area. He also hosts students wanting to tour an official cooperative weather station.

The Grove/Weaver family has been in the Aweather business@ for 134 years. They have received the 100 year service award and in October 1990 received the John Campanius Holmes award. The Weaver=s son, John, also assists in taking weather records when needed. Taking daily weather records has become a part of life for the entire Grove/Weaver family.

Co-Op Spotlight… Location...Location...Location

The Romney, WV observing station began at the West Virginia School for the Deaf and Blind. In June 1950, J. P. Kuykendall became the official observer and continued until June 1954. Frances Vance followed. She was the observer for 18 years, stopping July 1972. It took some time to find a replacement but the station started operation again November 1972 at the Romney Water Plant. The weather station remains on plant property today.

The station was located at the original plant, next to the South Branch Potomac River on the lower side of School Street. The plant operators recorded the daily weather data. With the major flood of November 1985, the plant was almost completely under water and the weather station was washed away.

The weather station was reactivated April 1986. Beginning December 1993, the observers started sending their data directly into a National Weather Service (NWS) computer via a programma-

(Continued on page 3)

Co-Op Spotlight… Romney, West Virginia Weather Station

(Continued from page 2)

ble phone. This allows the NWS to see the data on a near-real time basis. It assists forecasters in developing the current weather picture and evaluating recent past conditions.

Following the 1996 Blizzard was another major flood on the South Branch Potomac. Once again, the plant and weather station were flooded. Part of the weather station washed away but was found downstream. The station was fully operational again before the September flood of that year. Because of their location, the observers take a manual river level observation when requested. This is usually done with significant river rises. A special river ice report is requested during extended winter cold spells to determine the ice conditions, movement, and potential for ice jams.

In 1999, the plant and weather station moved to the higher side of School Street. Hopefully the river won't reach the new higher station location! The Romney observers at the plant include supervisor Jonathan Lewis and operator Steve Bowers. Operator Bob Steele was an observer who retired March 8th of this year.

What is the Cooperative Observer Program?

The Cooperative Observer Program is a volunteer network of 12,000 weather observers. They operate at approximately 25-mile intervals across the county recording the daily weather conditions such as maximum and minimum temperatures, precipitation, snowfall and depth, and river levels.

Observers record the data everyday and when they are not able to do so (vacation, sick) someone else has to fill-in. The data becomes part of the national climate history and is published and archived at the National Climatic Data Center in Asheville, North Carolina. The data is requested routinely for environmental and commerce interests, research, and court records. The Co-op Program officially began in 1890 under the Organic Act, but diligent weather observations date back to the time of Independence. Many of the founding fathers including George Washington, Thomas Jefferson, and Benjamin Franklin kept weather records. Jefferson maintained an almost unbroken record between 1776 and 1816, and Washington recorded his last observation only days before he died.

The Cooperative Observer is a dedicated volunteer that provides quality data to assist the National Weather Services in our daily mission.

SKYWARN Spotlight *By Melody Paschetag, SKYWARN Coordinator*

What is SKYWARN?

SKYWARN is a national network of volunteer severe weather spotters. The spotters are trained by the local National Weather Forecast Offices on how to spot severe thunderstorms, tornadoes, hail, flooding, snowfall and ice accumulation. Spotter reports provide critical information to the Weather Office.

Visit the National Weather Service Washington/ Baltimore Skywarn Homepage at the following address for more information:

http://weather.noaa.gov/lwx/skywarn/skywarn.htm

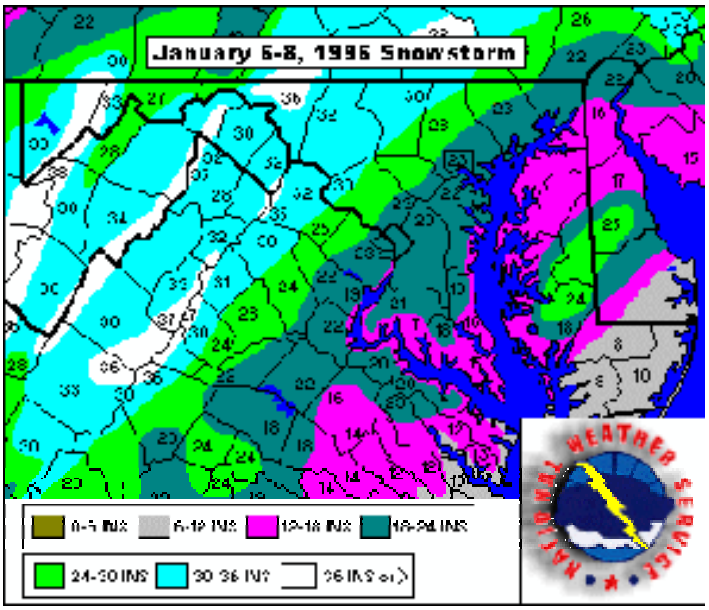
SKYWARN Spotlight

George Spends the Night at the National Weather Service

George Saunders received his amateur radio license in April 1993 and became a part of the Sterling SKYWARN program in 1995. George became the SKYWARN Net Coordinator in the summer of 1996, which was an active weather season. The National Weather Service activated SKYWARN 13 times and Georges traveled to the office each time to monitor the radios.

As Net Coordinator, he taught Net Control classes for the amateur radio operators within SKYWARN and gave several SKYWARN presentations at area amateur radio clubs. George also installed a permanent High Frequency (HF) antenna at the office. This replaced the need to manually erect the HF antenna when needed. George was also the Net Manager of the Bluemont, VA repeater (147.300+), which is the primary repeater for the Sterling SKYWARN program. George continued as Net Coordinator until November 2000.

George=s most memorable SKYWARN event was the Blizzard of 1996, which occurred before he became Net Coordinator. In early January, 2 to 3 feet of snow blanked the area. Heavy snow closed roads, brought down trees, phone lines and power lines. George was snowed in at the Weather Service office for 3 days. He received spotter reports through amateur radio and relayed them to forecasters. George=s breaks consisted of taking short naps in the office conference room.



George remains an active part of SKYWARN. He answers questions, participates in the quarterly SKYWARN Advisory Committee meetings and frequently stops by the office. George is a retired Dental Technician and a member of the Arlington Amateur Radio Club. He is also active in the Red Cross Disaster Services. George assisted the Red Cross with communications during the Miami Flooding, the flooding in southeast Virginia from Floyd and following the September 11th attack on the Pentagon. George has helped SKYWARN and the community in many ways. Thank you George!

Spring/Summer SKYWARN Training Classes

Here=s your chance to join the National Weather Service SKYWARN Spotter Network or enhance your severe weather spotting skills. How can you sign up for these free classes? Visit our SKYWARN training web site for details: http://weather.noaa.gov/lwx/skywarn/classes.html

Basics I Class

This class is essential for becoming a SKYWARN Spotter. It is a 3-hour class that covers the basics of how SKYWARN and the National Weather Service operate, what you need to report and how, and how to spot severe thunderstorms and tornadoes. This class is a pre-requisite for all other classes.

Saturday, April 27th, 9:00AM-12:00PM at George Mason University -Prince William Campus, VA

Tuesday, May 7th, 1:30-4:30PM at Forest Hill, MD

Wednesday, May 22nd, 7-10 PM at Towson, MD

Tuesday, June 4th, 6-9 PM at Bardane, Jefferson Co., WV

(Continued on page 5)

More SKYWARN Spring/Summer Training Classes...

(Continued from page 4)

Basics II Class

This class is an optional sequel to the Basics I class. It is 2 1/2 hours long. It is good for spotters who need a refresher or feel they want additional information and training. It reviews the basic spotting techniques and covers more information about thunderstorms and Doppler radar. You must have taken Basics 1 to attend this class. This class is held at the National Weather Service office near Dulles Airport.

Thursday, May 2nd, 7:00-9:00PM

Hurricane Class

This is an optional 2 1/2 hour class that is offered seasonally (June-September). Its focus is Mid-Atlantic hurricanes, their frequency and history, outlook for the season, how hurricanes form, categories, their names, how to be prepared, and how SKYWARN operates. You must have taken Basics 1 to attend this class. This class is held at the National Weather Service office near Dulles Airport.

Thursday, July 18th 7:00-9:00PM

Saturday, August 3rd, 1:00-3:00PM

Regional Weather Review

By Michelle Margraf, Storm Data Focal Point

Here is a list of weather events that had an impact on our region between November 2001 and February 2002. This information is compiled from reports from volunteer and co-op weather observers, SKYWARN spotters, county and state officials, and automated weather observations. This information is included in the National Weather Service=s monthly publication, *Storm Data and Unusual Weather Phenomenon*.

November 2001

25th: A short lived thunderstorm that produced large hail moved across Montgomery County, Maryland between 3 and 4 PM. Spotters reported hail ranging from the size of peas to golf balls as the storm passed through.

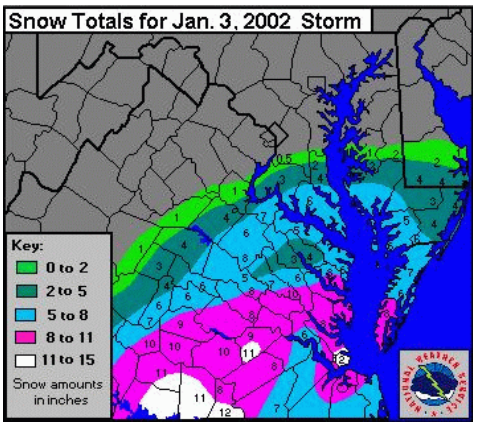
December 2001

20th: A strong cold front that passed through just before sunrise brought winds of 30 to 50 mph to the Appalachian foothills. Wind gusts included 55 MPH at Petersburg, West Virginia and 48 MPH at Cumberland, Maryland. A gust of 75 MPH was recorded on a wind sensor atop a 75-foot tower in Keyser, West Virginia.

28th-29th: A weak area of low pressure brought snow showers to the Appalachian Foothills. Two to four inches of snow accumulated in Grant and Mineral Counties in the Eastern Panhandle of West Virginia.

January 2002

3rd: Low pressure tracked across extreme southeast Virginia and brought light to moderate snow to the Central Piedmont and Fredericksburg area of Virginia in addition to Southern Maryland. Snowfall accumulations between 1 and 6



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inches occurred south of a line from Charlottesville, Virginia to Waldorf, Maryland (see map). The storm hit just before the start of morning commute and several traffic accidents were reported.

6th: Low pressure moved from the Gulf Coast to the Delmarva Peninsula on the 6th. From the Blue Ridge Mountains west, the precipitation fell mainly in the form of snow after a period of freezing rain and sleet at the onset. However, the Shenandoah Valley received an extended period of freezing rain and several traffic accidents occurred. East of the Blue Ridge, a mix of rain, freezing rain, and sleet changed over to sleet and snow late in the day. Snow and sleet accumulations region wide ranged from 1 to 7 inches.

9th: Light rain and drizzle measuring three tenths of an inch or less fell between 6 and 7 AM along a 50 mile wide band stretching from Western Fairfax County, Virginia to Harford County, Maryland. Roads and sidewalks in this area were just below freezing so the precipitation froze on impact creating a thin layer of ice. Numerous traffic accidents and pedestrian slip and fall injuries were reported in the affected area. Conditions rapidly improved after 8 AM when temperatures rose above freezing.

19th: Low pressure tracked across North Carolina and brought mixed precipitation to the region between 6 AM and 11 PM. In most locations, the precipitation started off in the form of snow, then changed to a mix of sleet and rain around midday. Snow and sleet accumulations ranged from 1 to 6 inches.

February 2002

1st: A strong cold front moved across the Mid-Atlantic region during the afternoon. Wind gusts of 40 to 50 MPH were reported for several hours after the front passed. Scattered power outages and downed trees were reported region wide.

LWX Historical Chronicle - Tales of Past Weather Events

Research by Barbara Watson, Warning Coordination Meteorologist

The La Plata Killer Tornado November 9, 1926

A tornado (estimated to be F4 with winds up to 250 mph) touched down about 5 miles southwest of La Plata at about 2:30 pm. It moved northeast through La Plata and continued on the ground traveling 18 miles in 20 to 25 minutes to Cedarville in Prince Georges County. Its damage path was about 500 feet in width. Little thunder occurred with the storm. Torrential rain occurred at the time of the tornado's passage. Some hail fell. The tornado's roar was heard up to 3 miles away. Debris from the tornado was blown inward and forward (a classic tornado pattern).

From this description in Monthly Weather Review for November 1926, the "vortex swayed from side to side as it progressed", it was likely a multi-vortex tornado. Large tornadoes often break down into smaller vortices which rotate around the wall of the larger cyclone. At some places, the tornado "furrowed into the soil".

In La Plata, four homes, several large barns and the school house were completely demolished - lifted from their foundations and shattered. The schoolhouse, with its 60 children and two teachers was lifted from its foundation and smashed against a grove of trees 50 feet away. Debris from the school, children's belongings, and school furnishings were scattered in all directions. Some of the children were carried 500 feet and the body of one child was found in the top branches of a tree 300 feet away. Parts of desks were found 7 miles away. Some of the wreckage of the schoolhouse was found deposited in a field a mile north of Upper Marlboro, 25 miles away. A page from a school ledger was found in Bowie, 36 miles to the north-northeast. About 6.5 miles from Annapolis,

(Continued on page 7)

(Continued from page 6)

almost 50 miles from La Plata, a 8 foot by 2 foot piece of galvanized roofing from the school fell. Fourteen school children were killed. The two teachers and all of the other children but one were injured. Miss Ethel Graves, a school teacher at the La Plata School describes what happened:

> **"It was just a few minutes before 3 o'clock that I heard a rumbling roar and the wind seemed to increase tremendously. I was just getting ready to take the children to some safer place when the glass from all of the windows blew out. The children had started toward me then and were beginning to group themselves about me when it seemed as if they and everything in the room about me had been pulled up by some unseen hooks. Then we were flying through the air. It seemed to me as if some of the children and parts of the building passed me several times. I lost consciousness then."**

An additional four homes were badly damaged and 14 tobacco barns and their contents of 4,000 to 7,000 pounds of tobacco were a total loss. At Cedarville, one home, one store, and 4 barns were destroyed. Several other homes were badly damaged. Six families were rendered homeless. A mother and her three children were injured when her home collapsed. The clerk of the general store was sucked out the front door, across the road, and slammed against a telephone pole were the wind tore his trousers off of him.

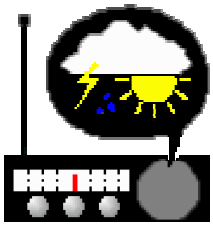
On a farm, a barn in which a horse and cow were feeding was picked up and carried away, leaving the animals in their places uninjured. Chickens were defeathered. In the destruction of homes, 9 people were injured and 3 more were killed. Barns, sheds, outbuildings, fences, garages, a gas station, trees, and telephone poles in the path of the tornado were all leveled.

A number of automobiles were demolished. Damages were estimated at $100,000 (1926 dollars). A total of 17 people were known to have died with 60 reported injured.

The Weather Pattern: An intense low pressure area was moving rapidly northeast from central Indiana to extreme southern Ontario. A trough extended south from the low center over the region. Winds ahead of the trough were south to southwest at the surface and southwest aloft to 2000 meters. At about 5000 feet, the winds were from the southwest at 48 knots (56 mph). The trough passed Washington, DC later that night at 10 pm. About the same time as the tornado struck La Plata, a thunderstorm dropped 0.65 inches of rain in DC in just 9 minutes.

NOAA Weather Radio

By Christopher Strong - Meteorologist/Lead Forecaster



My name is Christopher Strong and I lead the NOAA Weather Radio program for the Baltimore/ Washington office of the National Weather Service. NOAA Weather Radio (or NWR) is the voice of the National Service.

Our radio network broadcasts weather information to over 95% of the nation. The broadcast can be picked up on land or sea by special radio receivers that receive short wave radio broadcasts. These include standard short wave radio receivers (or HAM radios), weather radios that are specifically built to receive only NOAA Weather Radio broadcasts, marine radios, and some automobile and personal radios that have a "weather channel" built-in.

WHY IS NOAA WEATHER RADIO IMPORTANT ??

NWR broadcasts tornado warnings, hurricane warnings, winter storm warnings, and all types of dangerous weather alerts. As soon as dangerous, or even deadly, weather is detected by the National Weather Service, an alert is generated. This alert is immediately broadcast on NOAA Weather Radio, giving you

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the MOST time to take cover, or take action. Not only is the alert broadcast, but it can be set to alarm your radio. Weather radios are available at electronics stores. The most widely available units alarm if a dangerous weather alert is issued. Some of the newer radios now can be set to only alarm if a weather alert is issued for your county. In any case, this alarm notifies you of dangerous weather, much like a smoke detector warns you of a fire.

A real life example of NOAA Weather Radio in action was during the tornado that passed across metropolitan Washington in the fall of 2001. This tornado did the most damage and loss of life around the University of Maryland and College Park. The tornadic storm was detected by the National Weather Service as it formed over central Virginia. A tornado warning was issued for the path of the storm. That warning went over NOAA Weather Radio alerting all in the path to take cover. Everyone that had NOAA Weather radio received notification with precious minutes of lead time of the impending tornado.

NWR broadcasts on short wave frequencies from 162.400 megahertz (MHz) to 162.550 MHz. Different transmitters around the country broadcast on different frequencies in that range. Each of these transmitters broadcast with much less power than your standard FM radio stations, but they do reach out generally about 30 to 60 miles from the site. That range will vary from day to day given different weather conditions.

NOAA Weather Radio has undergone a modernization in the past ten years. When I first arrived at the Baltimore / Washington National Weather Service office in 1993, NOAA Weather Radio was broadcast from a series of reel to reel tape cartridges. Each tape cartridge had a different weather message, and was placed in a slot of the player console (called an AMPRO unit). There was one refrigerator-sized AMPRO unit for each NWR transmitter. The player cycled between all the tapes, then started from the top, over and over again. To record a new tape, we had to erase what was previously on a tape with a large magnet, then record the new message. This worked adequately during the 60s, 70s, and 80s, but new technology allowed this large console to be replaced by digital units. These digital units came the office in 1995. Not only were the digital consoles much smaller and more reliable, but the individual tape cartridges were replaced by silicon chips. This allowed messages to be recorded onto these chips, much like a greeting is stored on new model answering machines.

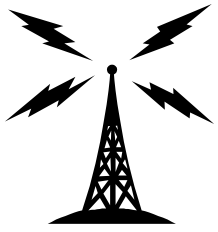
In 2000, technology had advanced to the point where the whole system of NOAA Weather Radio could be revamped and revised for a new century of service. That new system was the Console Replacement System (or CRS). During the past two years that system has gradually been spun up to its capabilities.

The greatest thing about CRS is that the whole process has been automated. Rather than having a weather message printed, taken to the broadcast room, then read by a broadcaster, the message now goes directly into the radio broadcast as soon as it is issued. This adds on valuable time for weather warnings, and helps eliminate errors.

Currently at our office, all of our transmitters broadcast the standard products automatically. The weather watches and warnings will be automated soon when our new voice arrives this spring. The new voice will be clearer, allowing the all-important warnings to be easily understood when they are transmitted.

Currently our office broadcasts from six transmitters:

Manassas, VA 162.550 MHz
Pikesville, MD 162.400 MHz
Hagerstown, MD 162.475 MHz
Moorefield, WV 162.400 MHz
Charlottesville, VA 162.450 MHz
Frostburg, MD 162.425 MHz

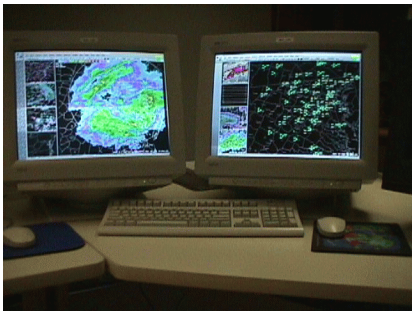


...of course there are transmitters all across the nation, run by the nationwide network of National Weather Service offices. To locate which transmitter will best serve your needs, visit the NOAA Weather Radio section of our web page: **http://weather.noaa.gov/lwx/nwr/nwr.htm**

AWIPS and IFPS...Changing the Way Forecasts are Made

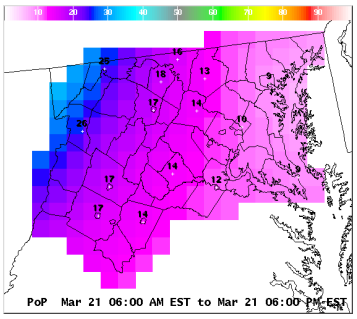
By John Margraf, Information Technology Officer

During the late 1990s, National Weather Service offices across the country received a dramatic upgrade to the technology used to display and process meteorological data. Prior to this time, weather offices had several different computer systems, each displaying a different type of data. One computer was used to display and transmit text products. Another was used to display satellite data. Another was used to display forecast model output. Yet another was used to collect local weather observations. We had a tremendous amount of data available to us, but the forecast process was very inefficient. The installation of the **A**dvanced **W**eather **I**nteractive **P**rocessing **S**ystem (**AWIPS**) streamlined the way we get our job done.



AWIPS is a computer system made up of several high-powered servers and workstations. Every meteorological data set imaginable can be displayed on AWIPS, and all of the software that a meteorologist needs to produce a suite of forecast products can be accessed on the system. So, instead of using several independent computer systems to complete a forecast, everything a forecaster needs is together in one place.

As an example of how AWIPS has improved our efficiency: Before we had AWIPS, it would take a meteorologist up to 3 minutes to type up and transmit a Severe Thunderstorm Warning. Obviously, during a dangerous weather situation such as this, 3 minutes is a critical amount of time. With AWIPS and the Warning Generation software that we have on the system, a meteorologist can produce and transmit a warning in less than 1 minute. All it takes is a couple of clicks of a mouse, and a couple of strokes on the keyboard Our new computer system is allowing us to get critical weather information out to you almost immediately!



Over the next year and a half, software and hardware upgrades on AWIPS will allow National Weather Service offices to improve the process in which we deliver our basic forecast products. Our forecasters are now completing training on using the **I**nteractive **F**orecast **P**reparation **P**rocess (**IFPS**), in which we complete our forecast in a gridded database. From this database, we can format any of the routine text products that we issue, and create forecast images for those users who desire the information in a graphical format.

We are currently producing our regular forecasts in some new experimental formats. To see a complete forecast for your county in a graphical format, take a look at our graphical forecast page on the internet: http://weather.noaa.gov/lwx/digital.htm

Experimental forecast graphics of high temperature, low temperature and probability of precipitation forecasts can be viewed at http://weather.noaa.gov/lwx/graphics/forecast_graphics.htm

Later this year, we will have more information on how our forecast data from the IFPS will be transmitted into a nationwide **N**ational **D**igital **F**orecast **D**atabase (**NDFD**). Having an entire nation's forecast information in one database will allow users to apply new technology to get a specific forecast. For instance, someone traveling from Washington DC to Pittsburgh would be able to input their route into a computer interface and grab the entire forecast straight from the NDFD, instead of looking at text forecasts issued by several different offices along the way. Anyone with a cell phone, pager, or any other device where a GPS coordinate can be identified would be able to get a forecast specific to his/her exact location through the NDFD. The NDFD is in its testing phase and is expected to be implemented in 2003.

Working for the National Weather Service

By Josephine Bergner, Administrative Support Assistant

I started working for the National Weather Service (NWS) in June, 1990, just after the office moved to Sterling, Virginia. I was the first deaf employee hired as an Administrative Support Assistant (ASA) in the National Weather Service. I was also offered a job at another government agency but chose the NWS because of its friendly environment and convenient location. As the only deaf employee at the office, I=ve had no communication problems. I communicate with the staff via e-mail, notes, light gestures, some lip reading, and phone calls via the Federal Relay Service operator.

From 1984 to 1988, I worked for the National Ocean Services (NOS) in Rockville, Maryland. There were three deaf employees at that time. The office has since moved to Silver Spring and now there are eleven deaf employees.

While working for the NOS, I taught sign language to the staff during breaks. I was encouraged by my supervisor because his wife taught at a deaf school. While teaching, I met National Oceanic and Atmospheric Administration (NOAA) Commander Thomas Bergner. We were married January 1987. Soon after we were married, Tom was assigned to a NOAA ship based in Seattle, Washington. While there, I worked for the Office for Law Enforcement (OLE) of the NOS from 1988 to 1990. There were three deaf employees but I was the first ASA at OLE.

We returned to Northern Virginia in 1990, where we currently reside. I started working for the NWS in June 1990. My daughter, Kristen was born November 1991. She is bilingual (hearing and sign language) since age one.

I=ve taught sign language for the Continued Education Program and given presentations at elementary schools and colleges regarding my deaf culture. I also provided information on the weather warnings for deaf and hard of hearing program via special NOAA Weather Radios (NWR) and an emergency warning email. While working for the NWS, I=ve seen several improvements for the deaf and hard of hearing. There is more Deaf Awareness through Diversity and EEO programs and the availability of Interpreting Services. Once I retire, I plan to teach sign language at a local elementary school.

Winter 2001-2002...One of the Warmest and Driest on Record

By Dewey Walston, Lead Forecaster/Climate Focal Point

This winter was one of the warmest and driest on record in the area since records began in the early 1870s. Winter temperatures averaged over 5 degrees above normal across the area. This winter was the 3rd warmest on record in Washington DC and the 9th warmest on record in Baltimore.

WARMEST WINTERS IN WASHINGTON

44.6 DEGREES	1931-32
44.3 DEGREES	1889-90
43.2 DEGREES	**2001-02**
42.9 DEGREES	1949-50
42.5 DEGREES	1997-98

WARMEST WINTERS IN BALTIMORE

45.3 DEGREES	1931-32
43.9 DEGREES	1889-90
42.3 DEGREES	1948-49
42.0 DEGREES	1949-50
42.0 DEGREES	1879-80
40.8 DEGREES	1932-33
40.3 DEGREES	1997-98
40.3 DEGREES	1936-37
40.2 DEGREES	**2001-02**

(Continued on page 11)

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Winter Precipitation averaged less than 50% of normal across the area this winter. This winter was the 2nd driest on record in Washington and the 4th driest on record in Baltimore.

DRIEST WINTERS IN WASHINGTON
2.60 INCHES 1871-72
3.32 INCHES 2001-02
3.85 INCHES 1980-81
4.15 INCHES 1976-77
4.76 INCHES 1873-74

DRIEST WINTERS IN BALTIMORE
4.03 INCHES 1976-77
4.12 INCHES 1980-81
4.24 INCHES 1871-72
4.28 INCHES 2001-02
4.51 INCHES 1979-80

The dry weather over the winter has resulted in a worsening of drought conditions which started in the autumn. A very dry autumn and winter has placed much of the area in a moderate to severe drought. Usually, winter droughts do not cause a lot of problems because water usage is at minimum and most plants and trees are dormant and not using significant amounts of water. However, as warm weather approaches, water usage will increase. In addition, evaporation rates will increase and vegetation and trees will be using more water. If we do not receive above normal rainfall over the next couple of months, the drought will worsen as we move into summer because water usage will increase.

With the warm and dry weather, this winter had well below normal snowfall. Snowfall over the area was generally 2 to 4 inches which is about 16 inches below the normal.

We were not alone this winter when it comes to warm weather. The contiguous United States experienced record warm during November through January. In fact, the period the November through January was the warmest for the United States since records began in 1895. The January global temperature was the warmest in 123 years as warmer than normal temperatures covered most land areas of the northern hemisphere.

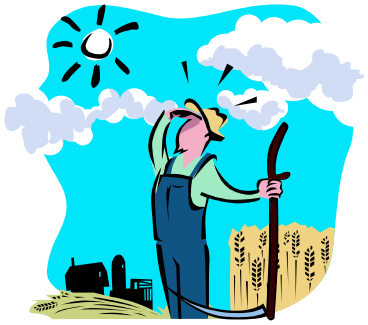
Now the question arises, why the warm winter?

During the winter, we had neither El Nino or La Nina conditions influencing the weather patterns. When you don't have an El Nino or La Nina, conditions are typically characterized by highly variable temperature patterns. Two climate players that contribute to the variability are the Madden-Julian Oscillation and the Arctic Oscillation. Both of these players favored warmth in the U.S. this winter. The exact role that the Madden-Julian Oscillation and Arctic Oscillation play in U.S. weather patterns is a subject of ongoing research at NOAA.

As a result of the Madden-Julian Oscillation and the Arctic Oscillation, the jet stream was shifted north of its usual winter position pushing the main storm track across southern Canada. This prevented a lot of arctic air from penetrating into the U.S. and much of the arctic air this season remained bottled up in Canada.

The warm weather was not a manifestation of global warming. For example, the period November through December of 2000 was the coldest 2 month period on record in the United States.

What will the spring and summer be like?
The Climate Prediction Center's outlook for the spring months of March, April and May indicate no bias toward warmer or cooler temperatures and no bias toward wetter or drier than normal weather. The outlook for the summer months of June, July and August indicate a bias toward warmer than normal temperatures and no bias toward wetter or drier than normal weather.



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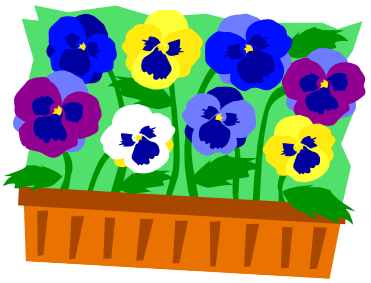
We hope you enjoyed our first newsletter. This newsletter will be published four times a year. We encourage your comments and suggestions.

Until Next Time…

The Staff at

NWS Sterling, VA



Cooperative Observers and SKYWARN Volunteers
Mark your calendar for an upcoming social event…

What: Cooperative Observer and SKYWARN Open House, Picnic, and Awards Ceremony

Where: National Weather Service Forecast Office at Sterling, Virginia

When: Saturday afternoon, August 10th, 2002

Check our web page and the summer edition of the *Sterling Reporter* for more information!